

REMARKS/ARGUMENTS

Claims 1-33 are pending in the present application. The Office Action mailed July 17, 2007 rejected claims 1-33 under 35 U.S.C. § 103. Claims 1, 4-6, 9, 10, 12, 16-18 and 25-28 have been amended. Claims 2, 3, 8, 14, 15, 22-24, 30 and 31 have been canceled.

Reconsideration is respectfully requested in view of the above amendments to the claims and the following remarks.

A. Rejection of Claims 1-7, 10-14, 17-21, 24, 27-29 and 31 Under 35 U.S.C. § 103(a)

The Office Action rejected claims 1-7, 10-14, 17-21, 24, 27-29 and 31 under 35 U.S.C. § 103(a) based on “Dual Stack Hosts using “Bump-in-the-API” (BIA)” by Lee et al. (hereinafter, “Lee”) in view of U.S. Patent No. 5,721,876 to Yu et al. (hereinafter, “Yu”). This rejection is respectfully traversed.

The factual inquiries that are relevant in the determination of obviousness are determining the scope and contents of the prior art, ascertaining the differences between the prior art and the claims in issue, resolving the level of ordinary skill in the art, and evaluating evidence of secondary consideration. KSR Int’l Co. v. Teleflex Inc., 550 U.S. ___, 2007 U.S. LEXIS 4745, at **4-5 (2007) (citing Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17-18 (1966)). To establish a *prima facie* case of obviousness, the prior art references “must teach or suggest all the claim limitations.” M.P.E.P. § 2142. Moreover, the analysis in support of an obviousness rejection “should be made explicit.” KSR, 2007 U.S. LEXIS 4745, at **37. “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” Id. (citing In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Applicant respectfully submits that the claims at issue are patentably distinct from the cited references. The cited references do not teach or suggest all of the limitations in these claims.

Claim 1 as amended recites “inserting an Application Programming Interface (API) level translator layer, wherein the API level translator layer does not require a stack for IPv6; . . .

intercepting the function call by the API level translator layer, wherein interception of the function call is not required to occur after a packet is passed to an IPv4 stack.” Support for this amendment may be found in Applicant’s Specification in at least paras. [21], [50], [54] and Figures 5 and 8 of the present application. Applicant respectfully submits that Lee does not teach or suggest this claim element as amended.

Claim 1 has also been amended to include the following subject matter:

- providing an alternate implementation for a sending-related IPv4 socket function, wherein the alternate implementation comprises:
 - intercepting an IPv4 socket API call to send a packet;
 - translating the IPv4 socket API call to use a raw socket;
 - providing transport and IPv6 headers ahead of user supplied payload data;
 - fragmenting the packet as required;
 - calling a corresponding IPv4 socket API function for the raw socket;
 - and
 - passing the packet to the stack; and
- providing an alternate implementation for a reception-related IPv4 socket function, wherein the alternate implementation comprises:
 - receiving an incoming packet on a raw socket;
 - checking a source host to determine the proper destination for the incoming packet as required;
 - checking a port number for the incoming packet;
 - stripping transport and IP headers from the incoming packet; and
 - passing a payload to a destination application.

Lee discloses the insertion of “an API translator between the socket API module and the TCP/IP module in the dual stack hosts.” Lee, page 2. The API translator used by Lee is not the same as the API level translator layer of the present invention. The API translator used by Lee “translates the IPv4 socket API function into IPv6 socket API function and vice versa.” Lee, page 2. However, the BIA (Bump-in-the-API) approach used by Lee is for systems with an IPv6 stack. Lee states “BIA is for systems with an IPv6 stack.” (Lee, page 3.) Applicant respectfully asserts that the Office Action is incorrect when it stated “Lee discloses inserting an API level translator layer, wherein the

API level translator layer does not require a stack for the second version of the protocol.” (July 17, 2007 Office Action, page 3.)

Lee teaches the BIA (Bump-in-the-API) approach. Lee only mentions or references the BIS (Bump-in-the-Stack) approach to distinguish between the BIA approach and the BIS approach. Applicant asserts that Lee does not teach “an API translator is inserted between TCP/IP module and network card driver . . . using “Bump-in-the-Stack” (BIS) approach,” as urged by the Office Action. (July 17, 2007 Office Action, page 3.) Lee is distinguishing between Lee’s BIA approach and another different approach: the BIS approach. Lee states the following:

RFC2767 [BIS] specifies a host translation mechanism using a technique called “Bump-in-the-stack”. . . . **BIS** allows hosts to communicate with other IPv6 hosts using IPv4 applications. However, **this approach** is to use an API translator which is inserted between TCP/IP module and network card driver.

Lee, Page 2 (emphasis added). Thus, Lee teaches the BIA approach. Lee only mentions or references the BIS approach to distinguish between the BIA approach and the BIS approach.

Unlike the API translator disclosed by Lee in the BIA approach, the API level translator layer of the present invention “works even when there is no IPv6 stack installed.” Applicant’s Specification, para. [50]. Lee does not teach or suggest “inserting an API level translator layer, wherein the API level translator layer does not require a stack for IPv6; . . . intercepting the function call by the API level translator layer, wherein interception of the function call is not required to occur after a packet is passed to an IPv4 stack.”

Claim 1 recites “intercepting the function call by the API level translator layer, wherein interception of the function call is not required to occur after a packet is passed to an IPv4 stack.” The BIS approach does not teach or suggest this claimed subject matter. In the BIS scenario, IPv4 headers are added first by the TCP/IPv4 stack, then the BIS module intercepts packets and adds IPv6 headers. The BIS module needs to intercept packets between the IPv4 stack and the network driver. Thus, the BIS approach does not teach or suggest “intercepting the function call by the API level

translator layer, wherein interception of the function call is not required to occur after a packet is passed to an IPv4 stack.”

The January 30, 2007 Office Action states that “Lee does not specifically disclose making a function call to a socket Application Programming Interface (API) for the first version; translating the function call to a translated function call wherein the translated function call uses raw sockets; and making a function call to the socket API for the translated function call that uses raw sockets.” (January 30, 2007 Office Action, Pages 10-11.) This Office Action thus conceded that Lee does not disclose these claim elements of claim 1.

Claim 1 has also been amended to include the following subject matter: “providing an alternate implementation for a sending-related IPv4 socket function, wherein the alternate implementation comprises: intercepting an IPv4 socket API call to send a packet; translating the IPv4 socket API call to use a raw socket; providing transport and IPv6 headers ahead of user supplied payload data; fragmenting the packet as required; calling a corresponding IPv4 socket API function for the raw socket; and passing the packet to the stack; and providing an alternate implementation for a reception-related IPv4 socket function, wherein the alternate implementation comprises: receiving an incoming packet on a raw socket; checking a source host to determine the proper destination for the incoming packet as required; checking a port number for the incoming packet; stripping transport and IP headers from the incoming packet; and passing a payload to a destination application.” Lee does not teach or suggest this claimed subject matter.

As shown, Lee does not teach or suggest all of the claim limitations in claim 1. As will be shown, Yu also does not teach or suggest all of the limitations of claim 1.

Yu does not teach or suggest “inserting an API level translator layer, wherein the API level translator layer does not require a stack for the second version of the protocol.” Yu discloses that “the socket subroutines contained in host sockets library 97 serve as the application program interface (API) for TCP/IP. This API provides three types of communications services which use different components of TCP/IP.” (Yu, para. 7, lines 28-31.) Applicant respectfully submits that Yu

does not disclose “inserting an API level translator layer, wherein the API level translator layer does not require a stack for the second version of the protocol.”

Furthermore, Yu does not teach or suggest “translating the function call to a translated function call wherein the translated function call uses raw sockets.” Yu recites that “the socket subroutines contained in host sockets library 97 serve as the application program interface (API) for TCP/IP. This API provides three types of communications services which use different components of TCP/IP. These are reliable stream delivery, connectionless datagram delivery and raw socket delivery.” (Yu, para 7, lines 28-33.) Although Yu mentions the use of raw sockets, this does not teach or suggest “translating the function call to a translated function call wherein the translated function call uses raw sockets.” For the above reasons, Applicant respectfully submits that Yu does not disclose “translating the function call to a translated function call wherein the translated function call uses raw sockets.”

In view of the foregoing, Applicant respectfully submits that claim 1 is patentably distinct from Lee in view of Yu. Applicant respectfully requests that the rejection of claim 1 be withdrawn.

Claims 4-7, 10-13, and 17 depend either directly or indirectly from claim 1. Accordingly, Applicant respectfully requests that the rejection of claims 4-7, 10-13, and 17 be withdrawn for at least the same reasons as those presented above in connection with claim 1.

Claims 2, 3 and 14 have been canceled.

Claim 18 as amended recites “insert an Application Programming Interface (API) level translator layer, wherein the API level translator layer does not require a stack for IPv6.” Claim 18 has further been amended with subject matter similar to that described above with respect to claim 1. As argued above with respect to claim 1, the cited references do not teach or suggest this claim limitation. Accordingly, Applicant respectfully requests that the rejection of claim 18 be withdrawn for at least the same reasons as those presented above in connection with claim 1.

Claims 19-21 and 27 depend directly from claim 18. Accordingly, Applicant respectfully requests that the rejection of claims 19-21 and 27 be withdrawn for at least the same reasons as those presented above in connection with claim 18.

Claim 24 has been canceled.

Claim 28 as amended recites “insert an Application Programming Interface (API) level translator layer, wherein the API level translator layer does not require a stack for IPv6.” Claim 28 has further been amended with subject matter similar to that described above with respect to claim 1. As argued above with respect to claim 1, the cited references do not teach or suggest this claim limitation. Accordingly, Applicant respectfully requests that the rejection of claim 28 be withdrawn for at least the same reasons as those presented above in connection with claim 1.

Claim 29 depends directly from claim 28. Accordingly, Applicant respectfully requests that the rejection of claim 29 be withdrawn for at least the same reasons as those presented above in connection with claim 28.

Claim 31 has been canceled.

B. Rejection of Claims 8, 22-23 and 30 Under 35 U.S.C. § 103(a)

The Office Action rejected claims 8, 22-23 and 30 under 35 U.S.C. § 103(a) based on Lee in view of Yu, and further in view of U.S. Patent Application Publication No. 2003/0165160 to Minami et al. (hereinafter “Minami”). Claims 8, 22-23, and 30 have been canceled.

C. Rejection of Claims 9, 15-16, 25-26 and 32-33 Under 35 U.S.C. § 103(a)

The Office Action rejected claims 9, 15-16, 25-26 and 32-33 under 35 U.S.C. § 103(a) based on Lee in view of Yu, and further in view of “Transition Mechanism for IPv6 Hosts and Routers” by R. Gilligan (hereinafter “Gilligan”). This rejection is respectfully traversed. The burden to establish a *prima facie* case of obviousness is provided above. See, M.P.E.P. § 2142.

Claims 9 and 16 depend directly from claim 1. Accordingly, Applicant respectfully requests that the rejection of claims 9 and 16 be withdrawn for at least the same reasons as those presented above in connection with claim 1.

Claim 15 has been canceled.

Appl. No. 10/637,408
Amdt. dated October 16, 2007
Reply to Office Action of July 17, 2007

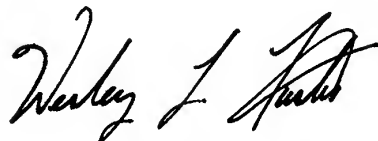
Claims 25 and 26 depend directly from claim 18. Accordingly, Applicant respectfully requests that the rejection of claims 25 and 26 be withdrawn for at least the same reasons as those presented above in connection with claim 18.

Claims 32 and 33 depend directly from claim 28. Accordingly, Applicant respectfully requests that the rejection of claims 32 and 33 be withdrawn for at least the same reasons as those presented above in connection with claim 28.

D. Conclusion

Applicants respectfully assert that all pending claims are patentably distinct from the cited references, and request that a timely Notice of Allowance be issued in this case. If there are any remaining issues preventing allowance of the pending claims that may be clarified by telephone, the Examiner is requested to call the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Wesley L. Austin', with a stylized flourish at the end.

/Wesley L. Austin/

Wesley L. Austin
Reg. No. 42,273
Attorney for Applicant

Date: October 16, 2007

MADSON & AUSTIN
15 West South Temple, Suite 900
Salt Lake City, Utah 84101
Telephone: (801) 537-1700